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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,479	09/26/2003	Douglas M. Smith	50001-00025	8244

7590 03/23/2004

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EXAMINER

SPITZER, ROBERT H

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,479

Applicant(s)

SMITH ET AL.

Examiner

Robert H. Spitzer

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33-49 is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01/05/04</u> . | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 1724

DETAILED ACTION

1. Claims 33-49 are allowed.
2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 2,13,14 and 17-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 is indefinite because there is no direct antecedent basis for the recitation of "said flow channels", as claim 1 only recites "a first flow channel". Claim 13 is indefinite because there is no direct antecedent basis for the recitation of "said cooling device". Claim 14 depends from indefinite claim 13 and is indefinite for that reason. Claim 17 is indefinite because in line 4, there is no direct antecedent basis for the recitation of "said cooling device". Claims 18-32 are indefinite because they depend from indefinite claim 17.
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
5. Claims 1,3-5,8,9,11-23,26,27 and 29-32 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the sorber structure (device) of Garrett et al. (5,268,022), particularly at col. 5, line 51 through col. 6, line 58.
6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1724

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garrett et al. (5,268,022) in view of Biskis (3,734,293). The claim differs from the structure of Garrett et al. ('022) in there being more than one flow channel. Biskis ('293) shows that a plurality of flow channels 12 can be used for an adsorption device (col. 2, lines 3-19). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to structure the filter device of Garrett et al. ('022) to have a plurality of flow channels, in view of the showing of Biskis ('293), so that the device can adsorb more water vapor and so that such device can be made smaller.

8. Claims 6,7,24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garrett et al. (5,268,022) in view of Smith et al. (6,559,096). The claims differ from the structure of Garrett et al. ('022) in the desiccant being a metal salt coated onto a porous support. Smith et al. ('096), at col. 3, lines 6-62, show a desiccant material which is a metal salt coated onto a porous support. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize a desiccant which is a metal salt supported (coated) on a porous support as the desiccant in the device of Garrett et al. ('022), in place of the alumina gel, in view of the showing of Smith et al. ('096), as any desiccant material known to the art would be expected to be interchangeable and usable in place of each other.

9. Claims 10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garrett et al. (5,268,022) in view of Colvin et al. (6,298,907). The claims differ from

Art Unit: 1724

the disclosure of Garrett et al. ('022) in the composition of the phase change material being a paraffinic material. Colvin et al. ('907), at col. 1, line 66 through col. 2, line 9, and col. 3, line 56 through col. 4, line 40, show that a phase change material can be either water or a "paraffinic hydrocarbon". It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize a paraffinic hydrocarbon in place of the water in the device of Garrett et al. ('022) as the phase change material, in view of such alternative showing by Colvin et al. ('907).

10. The remaining references listed on both the PTO-1449 and the PTO-892 show art of interest.

11. Applicants' response to this Office action should also include the following editorial changes: page 14, line 27, "in" should be inserted before "fluid"; page 16, lines 7 and 9, "fitting" should be "fittings"; page 18, line 19, "of" should be inserted before "the"; page 19, lines 10 and 29, "to" should be inserted after "perpendicular"; page 21, line 6, "to" should be inserted after "perpendicular"; claim 4, line 2, "as" should be "at"; claim 17, line 2, "anenclosed" should be "an enclosed", and in line 6, "saidenclosed" should be "said enclosed"; and, in claim 38, line 3, "glycerine silica gel" should be "glycerine, silica gel".

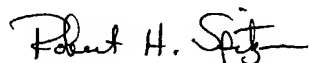
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert H. Spitzer whose telephone number is (571) 272-1167. The examiner can normally be reached on Monday-Thursday from (5:30AM-4:00PM).

Art Unit: 1724

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 16, 2004



Robert H. Spitzer
Primary Examiner
Art Unit 1724

March 16, 2004